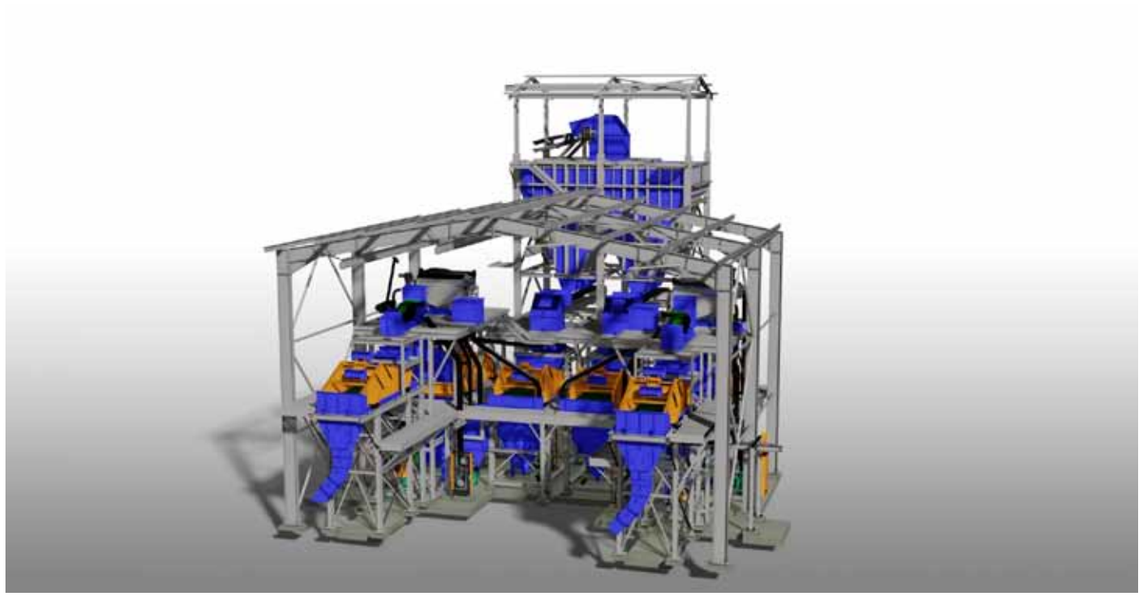
ADRA

MODULAR PLANTS



About DRA

DRA is a multi-disciplinary engineering group that delivers mining, minerals processing and infrastructure services from concept to commissioning, as well as comprehensive operations and maintenance services.

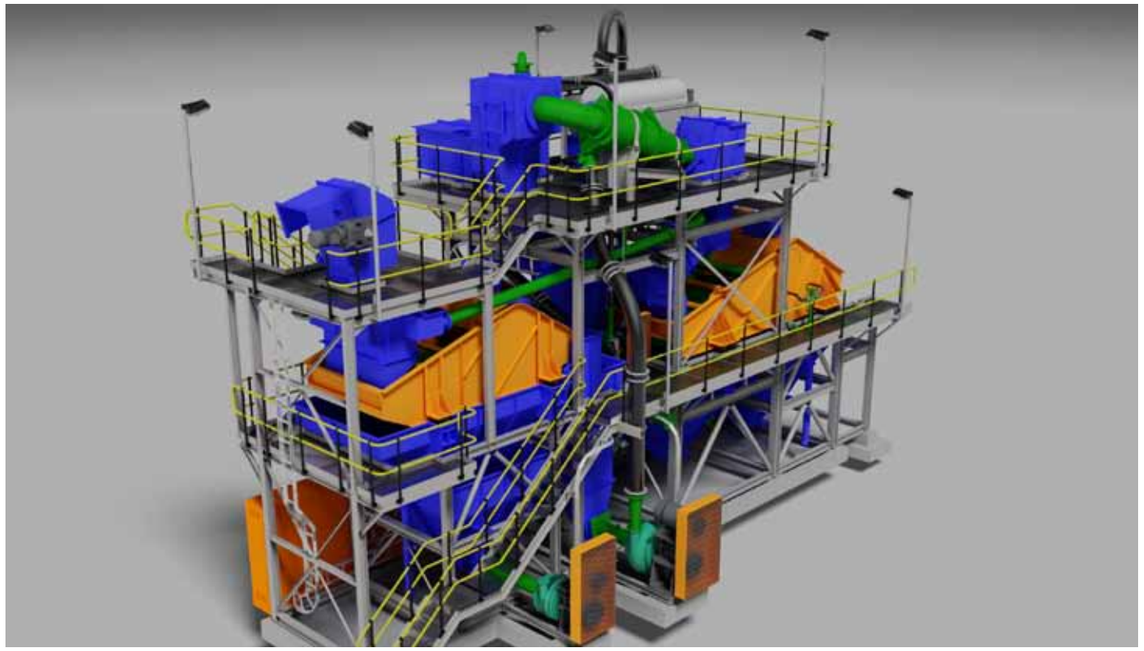
In 1984, we started design and construction management of minerals processing plants in South Africa. This soon expanded to include projects across Africa and the rest of the world.

We have established ourselves as leaders in these areas in Africa and are rapidly expanding our business in other parts of the world. Our expertise covers a wide range of commodities including gold, platinum, coal, ferrous metals, diamonds, uranium, base metals, potash and rare earths.

DRA is a private company owned by our employees. We employ over 3,300 people globally. Our workforce includes 1,480 engineers and project managers from various disciplines, draughtspeople, operators and support staff. Our people are our most valued resource and many are recognised as leaders in their fields.

As part of our offering, we provide a comprehensive list of engineering services required to advance a mineral project from concept to commissioning. Our contract operations division operates and maintains numerous minerals processing plants around the world on behalf of our clients. In addition, DRA undertakes the design and construction management of surface and underground mining projects through its expertise in both hard and soft rock design and the use of specialised software. We also offer the design and implementation of associated infrastructure projects, such as ports, roads, bridges and accommodation.

Our headquarters in Johannesburg, South Africa, provides engineering support to our offices and operations in nine African countries. DRA TAGGART has an office in Pittsburgh, USA and Toronto, Canada, which employs approximately 350 people, to support our operations in South America. Additionally, DRA has offices in Australia (Perth and Brisbane), India and China, which support regional and global projects.



DRA Modular Plants

DRA produces a wide range of standard process plant modules, which can be combined in various ways, and integrated to best match the particular process requirements of individual projects and clients.

Our standard modular plants are designed to process coal, iron ore, diamonds, chrome, manganese and mineral sands, as well as metalliferous ores (both precious and base metals) that are disposed to pre-concentration and the removal of gangue using dense medium separation (DMS) and gravity separation technologies.

These plants are efficient and easy to operate and maintain – the result of 30 years' experience in successfully providing small and medium-sized operations with mineral processing solutions.

Where standard modules cannot meet the particular requirements of a given project, DRA will also undertake the engineering and design of tailored modules.

Advantages of Modular Plants

Modular plants offer numerous advantages over conventionally tailored plant designs. Because they are pre-engineered, the manufacturing lead time is much shorter. Workshop pre-assembly results in simpler and quicker erection on site, which leads to shorter overall project duration, lower site costs and quicker returns.

They can be utilised to gain early access at low capital cost, followed by phased expansion at a later date, once a steady cash flow has been established. The use of modular plants is also ideal in cases where a small deposit with a relatively short life of mine cannot support a large capital expenditure.

Innovative Design

Our selection of standard modules covers a wide range of capacities and unit processes, from crushing and screening through dense medium and spirals separation, to filtering and thickening modules, along with materials handling and storage. These allow us maximum flexibility in configuring and integrating the best solution for each project. The modules are designed to suit plant operations of various sizes, from small to medium-sized projects and allow for the addition of more streams to expand capacity, minimising the overall footprint and conveyor lengths, in order to keep plant costs to a minimum. We select and use proven equipment and suppliers to ensure best performance and backup for our plants.

Fit for purpose specifications and standards have been developed and adopted in order to drive plant costs down, while still ensuring that the high operational and safety standards for which DRA is known, are maintained throughout our modular plants.

Quick Supply and Erection

A library of pre-engineered standard module designs and plant layouts available ensures that DRA can accelerate the manufacturing and supply of its modular plants. This, combined with fast site construction and erection, ensures the shortest overall programme to commissioning and production.We are supported by partnerships with key equipment vendors for components such as screens, pumps, magnetic separators, crushers, cyclones, thickeners and water tanks. DRA is able to rapidly turn around the selection, integration and costing of plant modules to give quick, accurate and reliable costings to our clients.

Cost Effective

Engineered and designed to provide a low capital cost alternative to conventional tailored plants, modular plants are also designed to run at low operating cost levels, further enhancing the value of the plant.

Modular plants also have a higher residual value owing to the freedom of being able to quickly and easily relocate the plant to another site. The extent and duration of P&G requirements on site during the construction of a modular plant are significantly reduced with resultant cost savings.

Standard Commodity Plant Designs

COAL

DRA provides a wide range of modules for coal processing, from 100 tph to 600 tph capacity, including primary and secondary crushing, screening, dense medium separation, spirals, centrifuges, belt filters, feed and discard bins, thickeners, floc plants, conveyors and stackers. These modules can be variously combined to achieve the best configuration for washing and separating all types of coal.

Modular coal plants can be implemented for projects producing as little as 300,000 tonnes of coal per annum in a simple small DMS plant, to over 8 million tonnes of coal per annum using multiple streams of larger-sized modules. Water recovery is a critical driver in the design of DRA's modular plants, along with process efficiency and low power consumption.

IRON ORE

There are many iron ore deposits that require the ore to be upgraded in order to produce a saleable product. The dense medium separation and spirals technologies are well suited to this application and are becoming more commonplace because of the advantages offered by modular plants. These ores often require scrubbing to remove clay before upgrading. DRA provides modular solutions to make the treatment of these types of ore viable.

Quick deployment of modular DMS plants provides early access to production and cashflow to fund further development and expansion, while ensuring that capital and operating costs are kept to a minimum. For these reasons, modular plants are ideally suited to early access projects in remote locations.

DIAMONDS

DRA has been designing and building modular diamond plants for over twenty-five years, which have been supplied to countries all over the world. These plants have varied in capacity from 3 tph exploration plants, through, to 15 tph bulk sample plants, to 240 tph production plants, using single and twin-streamed DMS modules. These plants have included modular recovery sections as well as scrubbers, multi-stage crushing circuits, thickeners and flocculation plants.

Many clients have placed repeat orders with the company for additional plants on subsequent projects owing to their performance, efficiency, reliability, ease of operation, maintenance, low cost and quick delivery. DRA is a well-proven supplier of modular plants, acknowledged by the industry.

BASE METALS

Pre-concentration of metalliferous ore through the use of dense medium separation technology provides benefits such as upgrading of mill feed, reduction of ore cut-off grades, extension of life of mine, reduction in milling power consumption and reduction of reagents consumption, leading to increased higher production levels at lower overall unit costs. The suitability of an ore to this method of upgrade is dependent on the results of the densimetric testwork.

DRA has engineered and built modular DMS plants for a number of copper and zinc mines that have benefitted from this approach to project development. As a start-up strategy, DMS plants can be used to upgrade ores to grades wherein the concentrate is a saleable product in its own right.

Track Record

DRA has built numerous modular plants since the 1980s, mostly in the diamond and coal sectors, but has notably recently also built modular pre-concentration plants for copper, nickel and chrome.

Our track record in building large processing plants and projects speaks for itself, which perhaps overshadows our more modest, but no less important, modular offerings.

DRA Backup

DRA is a world leader in providing mineral and related infrastructure solutions to the global mining industry. The company has gained over 30 years' experience in providing tailored solutions to the industry and now offers standardised modular plants in addition to custom-designed plants heretofore offered.

Providing both pre-engineered standard modules and custom-designed modular plants, ensures that the company can meet all of its clients' plant requirements. This is further supported by DRA's growing capability in designing and building the wider infrastructure related to mining projects.

Modular Plants Completed

COAL

- Jindal Chirodzi Mine, Mozambique:
  400 tph DMS and
  2 x 200 tph DMS Modules, 2012
- Keaton Mining Vanggatfontein Mine, South Africa:
  2 x 240 tph DMS and Spirals Modules, 2 and 4 Seam Plant, 2011
  100 tph DMS Module, 5 Seam Plant, 2010
- Umthombo Resources Hakana Mine, South Africa:
  1 x 240 tph DMS and Spirals Modules, 2010
- Leeuw Mining Vaalkrantz Mine, South Africa:
  100 tph Three-stage DMS Wash Plant, 2004

DIAMONDS

- DTZ-OZGEO Chimanimani Mine, Zimbabwe:
  55 tph DMS Plant, 2013
- Alrosa Mirnyi Mine, Russia:
  2 x 150 tph DMS Modules, 2009
- Alrosa Anabar Mine, Russia:
  3 x 55 tph DMS Modules, 2007
- Trans Hex Nuwejaarskraal Mine, South Africa:
  100 tph DMS Plant

COPPER

- Chemaf Etoile Mine, DRC:
  2 x 100 tph DMS Modules, 2010
- Tiger Resources Kipoi Mine, DRC:
  65 tph DMS and Spirals Modules, 2011

NICKEL

- Lion Ore Tati Mine, Botswana:
  200 tph DMS Module, 2004
  200 tph DMS Module, 2005

CHROME

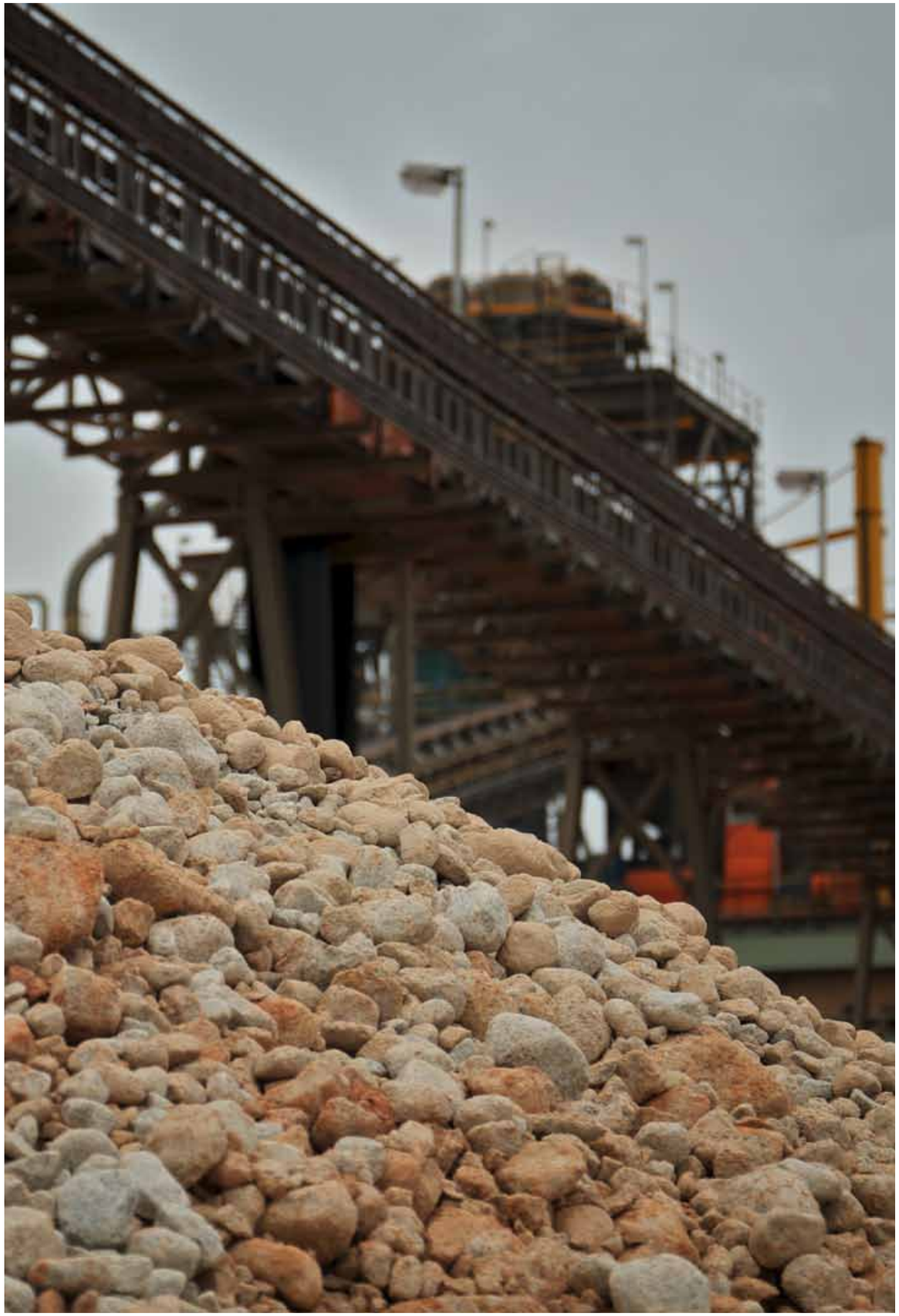
- Samancor Lannex Mine, South Africa:
  100 tph DMS Plant, 2004

MANGANESE

- Consolidated Minerals
  Bootu Creek Mine, Australia:
  100 tph DMS Module, 2006

Tailor-Made versus **Standard Modular Plants**

Lower Cost • Same Value • Quicker Returns



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